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Which Donors, Which Funds?

The Choice of Multilateral Funds by Bilateral Donors at the World Bank

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Abstract

The rapid growth of trust funds at multilateral development organizations has been widely neglected in the academic literature so far. Using a simple illustrative model, this paper examines the choice by sovereign donors among various trust fund options. The authors contend that the choice among the different trust funds involves a fundamental trade-off: larger funds provide donors with the benefit of burden sharing. Conversely, each donor can better assert its individual preferences in a fund with fewer other donors. The theoretical considerations yield testable implications on a range of factors affecting this fundamental tradeoff, most notably the area of intervention of the trust fund and competing domestic interests of donor countries. Using a sample of World Bank trust funds, the paper examines the participation decisions of Organisation for Economic Co-operation and Development/Development Assistance Committee donors over the past decade. In line with the theoretical argument, preference homogeneity among donors as well as indicators for global activities and fragile states assistance are robust determinants of participation in (large) multi-donor funds. In contrast, donors tend to prefer single-donor trust funds in areas in which their national interests dominate. Although they could use bilateral aid for the same purpose, they often prefer to channel their contributions through trust funds at multilateral agencies. Donors thereby reduce their own administrative costs, while benefiting from the expertise of the multilateral agency. These findings confirm prior qualitative case studies and evidence from donor reports, suggesting that reduced reliance on single-donor trust funds—a costly instrument from the perspective of multilateral agencies—can improve the development effectiveness of aid.

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1 Introduction

Existing theory suggests fundamental tradeoffs in the allocation of foreign aid. When choosing between bilateral aid and multilateral aid, donors trade off the ability to fully control disbursement decisions against the possibility to share the burden with other donors (Milner and Tingley 2013). Similarly, when choosing among different multilateral agencies, donors consider both the efficiency of the agency and the degree to which the donors find their own preferences aligned with the other donor countries supporting the agency (Schneider and Tobin 2013).

While established work considers the dichotomous choice of sovereign donors between bilateral aid and multilateral aid, it neglects the whole range of options on the continuum between these two extremes. These options have multiplied with the ascent of "multi-bi" aid since the early 1990s. Multi-bi aid refers to earmarked contributions by donor countries to international development organizations to support specific development purposes, notably specific themes, sectors, or countries (OECD 2011). Such contributions are funneled into trust funds housed at multilateral agencies, which are financial vehicles governed by administrative agreements between bilateral donors and a multilateral agency serving as trustee (Droesse 2011). For the bilateral donors, these trust funds appear to combine the advantages of the two conventional types of aid. On the one hand, they can harness the benefits of multilateral delegation such as economies of scale, reduced fragmentation, improved coordination, and knowledge dissemination (IEG 2011; Tortora and Steensen 2014). On the other hand, they make the multilateral agency more directly accountable to individual donors than in the case of "core" contributions to multilateral funds such as IDA (OECD 2011; Sridhar and Woods 2013; Graham 2015a). Tailor-made governance arrangements enable the donor(s) to specify the terms of their cooperation, potentially even including bilateral staff exchange, and tailored reporting on program results. Trust funds also imply a high degree of flexibility, since they do not need approval by the formal governing bodies of multilateral organizations. Trust funds can even support activities beyond the formal mandate of multilateral organizations. From this perspective, multi-bi aid hence resembles bilateral aid.[1]

Since the turn of the millennium, trust funds at international development organizations have grown massively. With a volume of 19 billion USD in 2012, multi-bi aid today comprises about 20% of bilateral aid and is almost 60% as large as the total volume of multilateral aid (Reinsberg, Michaelowa, and Eichenauer 2015). At the World Bank, annual trust fund contributions quadrupled within five years shortly after the millennium. Currently, the Bank receives annual contributions of about USD 4 billion (excluding funds for which the Bank only provides financial intermediary services), and these funds finance 10 percent of the

[1] In this paper, "bilateral aid" refers only to classical (or "pure") bilateral assistance excluding multi-bi aid, which we count as a separate category. This is in contrast to the OECD/DAC statistics that account for multi-bi aid as part of bilateral aid.

country operations and almost 30 percent of the Bank advisory services and analytical tasks (World Bank 2013a). The sheer number of different funds is even more striking. The World Bank manages over 700 IBRD/IDA trust funds, and almost a thousand funds when adding IFC trust funds to this count. These developments have raised concerns about increased administrative burdens, unsatisfactory monitoring and supervision requirements, and the distortion of program priorities (IEG 2011). World Bank alumni refer to the rise of trust funds as one of the key problems the Bank will have to solve in the near future (Linn 2009; The 1818 Society 2012). The flexibility for sovereign donors and their increased influence on Bank activities tends to be accompanied by reduced oversight and policy coherence within the Bank (IEG 2011). Similar concerns have been voiced in the United Nations system, which relies on earmarked funding for operational activities to an even greater degree than the Bank (UN 2012; UNDP 2012).

As a consequence, the various multilateral agencies have introduced institutional reforms to restrict the growth of at least some forms of multi-bi aid, notably with respect to the numerous small single-donor trust funds. For these small funds, the balance between costs and benefits is often considered as negative if all costs (including those arising to the multilateral agency) are truly taken into account (Tortora and Steensen 2014). Hence, reforms attempt to encourage a distinction between those trust funds that actually provide an efficient way of cooperation between sovereign donors, and those that generate disproportionate transaction costs and are not aligned with the overall strategy of the multilateral agencies.

For these reforms to be successful, it is essential first to gain an understanding of why and under which conditions sovereign donors engage in the different types of trust funds. This is precisely the question we seek to answer in this paper. There is a large number of agency reports and related case studies on which we can draw (for a review of these studies, see Reinsberg, Michaelowa, and Eichenauer 2015), but, to the best of our knowledge, the question has never been empirically addressed. Generally, despite its undeniably strong relevance, multi-bi aid has so far remained widely neglected in the academic literature. By providing a systematic theoretical and econometric analysis we attempt to generalize the lessons from previous case study evidence. Analytically, our analysis is close to the existing literature on donor choices between the more established categories of bi- and multilateral aid (Milner and Tingley 2013; Schneider and Tobin 2013), but complements these studies by a focus on the neglected intermediate category of multi-bi aid. Regarding donor motivations, we can also draw from the general aid allocation literature, an active research field since the mid-1970s (early examples are Dudley and Montmarquette 1976; McKinlay and Little 1977; Maizels and Nissanke 1984; or Frey and Schneider 1986), and – albeit more indirectly – from the general literature on institutional choice and the proliferation of international organizations (e.g., Martin 1992; Abbott and Snidal 1998; Koremenos, Lipson, and Snidal 2001; Johnson 2014). We do not consider the general question whether aid is provided as bilateral, multilateral or multi-bi aid (for a game-theoretic model to examine this question, see Eichenauer and Hug 2015). Rather, we consider a fixed budget for multi-bi aid (after decisions for multilateral and bilateral aid have been taken) and examine how this budget is allocated over different types of funds.

Our argument builds on the premise that a bilateral donor's preference for a particular type of trust fund depends on its trade-off between increased benefits from burden sharing and reduced homogeneity in preferences as the number of donors participating in a fund increases. Synergies from cooperating with other donors increase when there are more of them, but any given donor will have to compromise more on the priority (whether geographic, sectoral, thematic or other) objectives of the fund. A donor's utility gains from participation in any particular trust fund depend on specific donor and fund characteristics. For instance, in an area with low preference homogeneity among donors, cooperation with other donors should be less attractive, implying the donor will be more likely to opt for a single-donor trust fund. Conversely, in high-risk areas such as aid to post-conflict countries, cooperation shares the risk with other donors, and the donor is more likely to opt for a large multi-donor trust fund.

We test our hypotheses using a data set on all World Bank trust funds and donors' participation decisions over a period covering the financial years 2002-2013 (World Bank 2014b). Using Wald tests in seemingly unrelated regression estimations to compare the effect of fund and donor characteristics on the participation decisions in single-donor, multi-donor, and large multi-donor trust funds, we find consistent support for our main hypotheses. Overall, results are in line with the qualitative evidence in agency reports and related case studies that served as a basis for this more general analysis.

In the following, we first provide a more detailed review of the related literature (Section 2). On this basis, Section 3 develops our theoretical argument, and Section 4 derives concrete testable hypotheses related to donor choices of different types of trust funds. Section 5 proceeds with the econometric analysis. Section 6 further discusses the findings and concludes.

2 Literature

Few academic studies explicitly address multi-bi aid. In the 2000s, some articles cursorily mentioned trust funds, most notably as a means for middle-ranking powers to influence multilateral agency operations beyond their limited formal voting power (e.g., Kapur 2002; Woods 2005; Weaver 2007). Only recently have scholars begun to analyze multi-bi aid more systematically, and much of the work cited below is not yet published. Graham (2015a) traces the growing bilateralization of the United Nations development system. Her article raises concerns that multi-bi funding – the practice of earmarking voluntary contributions to multilateral agencies – undermines universal multilateralism. In addition, Graham (2015b) illustrates that variation in donor preferences over both the size and the substance of agency activity can explain macro-historical shifts in funding rules from core funding to (unearmarked) voluntary funding and earmarked funding at international organizations since the Second World War. Sridhar and Woods (2013) examine the specific case of the Global Fund to Fight Aids, Tuberculosis, and Malaria and suggest that donors channel resources through the Global Fund to influence the activities of the World Health Organization, a practice they term "Trojan multilateralism".

A broader analysis of multi-bi aid across all institutions has only become possible recently with the new multi-bi aid dataset (see Eichenauer and Reinsberg, 2015[2]). On this basis, Reinsberg, Michaelowa, and Eichenauer (2015) track the evolution of multi-bi aid after the Cold War, discussing its underlying motives and testing some widespread hypotheses on its implications for aid effectiveness (Reinsberg, Michaelowa, and Eichenauer 2015). From a theoretical perspective, Eichenauer and Hug (2015) study how the combination of donor preferences, discretion granted to the multilateral organization, and voting rules influence allocation decisions among bilateral aid, unearmarked voluntary contributions, and earmarked funding. Michaelowa, Reinsberg, and Schneider (2014) examine the choices of a specific donor, namely the European Union institutions. Further ongoing work on multi-bi aid studies the country allocations of trust funds in comparison to core-funded operations (Eichenauer and Knack 2015) and the implications of multi-bi financing on international development organizations in terms of distorting program priorities, rivalry with core resources, and funding sustainability (Reinsberg 2015). These studies illustrate that trust funds are used for various purposes and that the effectiveness of trust funds hinges upon their funding purposes and underlying motivations. None of these studies, however, explicitly examine the variety of choices within multi-bi aid.

These academic studies are complemented by a large body of agency reports (for a review, see Reinsberg, Michaelowa, and Eichenauer 2015). These reports suggest a variety of different donor motives behind multi-bi aid, and their outcomes show the need for more systematic analysis of the tradeoffs across various types of multi-bi aid. Many studies argue that multi-bi aid is popular with donors because it combines the "best of two worlds". On the one hand, it gives an individual donor nearly as much control as with bilateral aid, but without requiring the donor to sustain a full-fledged aid bureaucracy, and still benefiting from the expertise and professionalism of multilaterals (e.g., Carlsson 2007: 63; IEG 2011: 6; OECD 2011: 28; Tortora and Steensen 2014: 15). On the other hand, bilateral donors hope that by pooling their resources multi-bi aid can achieve key principles of the Paris Declaration[3], including recipient-country ownership, aid harmonization, and mutual accountability (e.g., Barakat 2009; Guder 2009; OECD 2011), although success is sometimes difficult to achieve (e.g., Barakat, Rzeszut, and Martin 2012).[4]

The variety of choices between different trust funds is not addressed by these studies, however, and most treatments of multi-bi aid pertain primarily to larger multi-donor trust funds. To analyze the choice among different types of trust funds, we draw on three related, more general strands of the literature on international organization and adapt their insights to our research questions.

The first strand concerns the rational design of international institutions that can be used to explain the associated institutional choices from a donor perspective. In general, the ra-

[2] For the codebook, see Eichenauer and Reinsberg (2014).

[3] For details on the Paris Declaration and the related Accra Agenda for Action, see http://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm (accessed February 1, 2015).

[4] This ambivalence on the potential purpose of trust funds – "bilateralization of multilateral aid" and "multilateralization of bilateral aid" – also features in other policy studies (e.g., Browne and Weiss 2012; Mahn 2012; Thalwitz 2015).

tional design literature relates specific institutional design choices of inter-state cooperation to the potential conflicts over the distribution of the gains from cooperation, the existence of an enforcement problem, the number of relevant actors in the field, as well as issue characteristics such as the distribution of state preferences, uncertainty, transaction costs, and group characteristics (e.g., Martin 1992; Abbott and Snidal 1998; Koremenos, Lipson, and Snidal 2001; Gutner 2005; Jupille, Mattli, and Snidal 2013). A more applied branch of this literature studies international regime proliferation and its underlying motives for member states (e.g., Raustiala and Victor 2004; Forman and Segaar 2006; Alter and Meunier 2009; Biermann, Pattberg, van Asselt, and Zelli 2009; Morse and Keohane 2014).

The rational design literature is relevant for our purpose because it can explain the establishment of trust funds. While we will analyze donor participation decisions rather than decisions about the establishment of new funds, in the case of trust funds these decisions are generally identical. Trust funds hosted at international development organizations are temporary mechanisms, often created in an ad hoc manner and with a donor base that usually changes little, if at all, over the lifetime of the fund. These characteristics distinguish trust funds from more sustainable institutional choices – such as legally independent multilateral organizations – although several trust funds have evolved into independent multilaterals.

The second strand of literature examines how donors allocate their aid budgets. This vast literature dates to the 1970s (e.g., Dudley and Montmarquette 1976; McKinlay and Little 1977; Maizels and Nissanke 1984; Frey and Schneider 1986) and establishes the general motivations for provision of foreign aid by donors. A major theme of this literature distinguishes donor interest and recipient need as primary motives. We expect similar motivations underlying the choice of trust funds. In particular, the specific strand of the aid allocation literature that compares allocations of bilateral donors to those of multilateral donors should provide analogies for our study. Just as multilaterals' allocations appear to be oriented more than bilaterals' towards recipient needs (see, e.g., Maizels and Nissanke 1984; Headey 2008; Birdsall and Kharas 2010; Knack, Rogers, and Eubank 2011), we should expect larger multi-donor trust funds to reflect development objectives more than small or single-donor trust funds that can be used as alternatives to bilateral aid in pursuing geopolitical or commercial interests.

The third strand of related literature deals with regime choices between bilateralism and multilateralism (e.g., Rixen and Rohlfing 2007; Rohlfing 2009; Thompson and Verdier 2013). We focus on the set of studies more narrowly analyzing the choice between alternative existing aid channels (e.g., Bermeo 2008; Dietrich 2013; Milner and Tingley 2013; Schneider and Tobin 2013). The latter two are most closely related to our work and will therefore be discussed in more detail.

In Milner and Tingley (2013), donors' choices between bilateral aid and multilateral aid trade off burden sharing against the ability to influence specific policies. If donors find their preferences to be aligned with the priorities of multilateral agencies, they give higher value to the benefits of burden sharing, and multilateral aid is the preferred choice. Conversely, if control is more important because preferences are poorly aligned, donors prefer bilateral aid. In contrast to their model, we require preference homogeneity among the different donors

within a trust fund, rather than between the individual donor and the multilateral agency. This assumption yields predictions on the type of funds donors create for varying degrees of preference homogeneity among them.

Schneider and Tobin (2013) study donors' contributions to different multilateral agencies. When choosing among multilateral institutions, donors trade off policy compatibility against risk aversion. Benefits from delegation increase when aid is channeled through multilaterals with policies that best match the bilateral's own preferences, but only up to the point where further concentration of funding on those organizations incurs excessive risk, such that the donor prefers to diversify its contributions among more multilaterals. Excessive risk can be a result of sudden changes in a multilateral's policies or in its efficiency. This theoretical approach has the advantage of providing an argument as to why donors spread their funding over numerous multilateral agencies. In contrast, Milner and Tingley (2013) do not specify diminishing benefits or increasing costs in their model, so a donor may provide positive amounts of only one type of aid. In reality, we observe donors making intermediate choices rather than allocating all aid to one alternative when selecting among institutional channels.

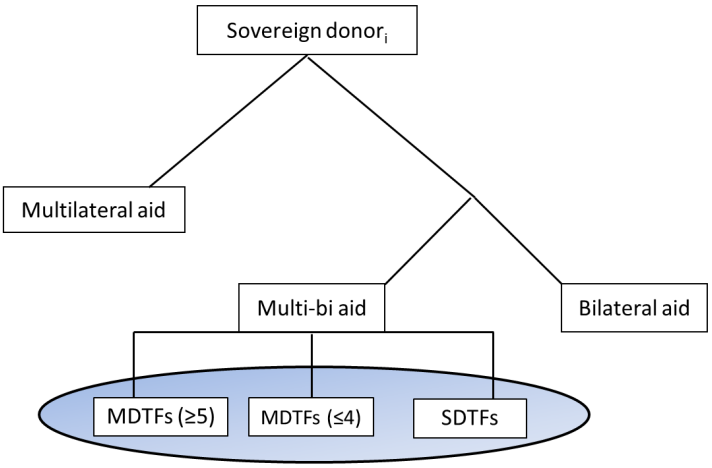
In this paper, we ensure the existence of such intermediate choices (regarding the number of participating donors in a trust fund) by considering that preference homogeneity between the different members of a trust fund itself declines, other things equal, with the number of individual donors. Hence, we can model the situation such that for a given trust fund, the utility of participation first increases and later decreases in the number of other donors. We formalize this idea and elaborate on our arguments in the following section.

3 Modeling trust fund choice

Assume that each sovereign donor i first takes a decision about (core) multilateral aid (often fixed through long-term international commitments) and about (pure) bilateral aid, i.e., aid implemented directly by bilateral agencies or their partners such as local NGOs. Once this decision is taken, the remaining aid budget is allocated to multi-bi aid. As highlighted by the ellipsis in Figure 1, this allocation process is the focus of this paper. The question whether and under which conditions multi-bi aid is preferred to bi- or multilateral aid in the first place is equally interesting, but its analysis requires a different data structure, based on disbursements by sovereign donors rather than on fund membership. We thus examine this question in other papers within our broader project on multi-bi aid (see, e.g., Eichenauer and Reinsberg 2015; Eichenauer and Hug 2015), and concentrate here on the choice between different types of multi-bi aid.

Multi-bi aid can be allocated to trust funds of different sizes, varying from single-donor trust funds (SDTFs) to very large multi-donor trust funds (MDTFs). For illustrative purposes, Figure 1 simplifies the choice to three types, namely SDTFs, small MDTFs (with two to four donors), and large MDTFs (with five or more donors). Note that the cut-off chosen between small and large MDTFs is somewhat arbitrary, but corresponds to the discussion in the literature. Moreover, donors are sometimes classified into groups with somewhat more similar preferences (e.g., the Nordic donors), which also usually include only 3 or 4 donors.

Figure 1: Individual donor decision among general aid types



We formalize the choice among these three options in a simple model to clarify and illustrate the donor's trade-offs. We assume that the utility U_i^f of donor i to participate in trust fund f increases with efficiency of resource use and with the extent to which development outcomes associated with trust funds are attributed to the donor government by its national constituency. Cooperation with other donors is expected to bring about a number of advantages in this respect. Following Milner and Tingley (2013), we refer to them as advantages of "burden sharing." In practice, these may include efficiency gains through synergies, risk sharing opportunities, or the possibility to contribute to important results with little resources. Hence for each donor, U_i^f should positively depend on α, the number of other donors participating in the fund.

At the same time, we consider that large divergences of preferences between donors reduce the utility of individual participation. Preference heterogeneity implies that donors do not really share the same objectives, leading to reduced efficiency from the perspective of each individual donor. Transactions cost associated with finding a consensus, and the lack of congruence between that consensus and each donor's own objectives, will be greater. Hence, U_i^f positively depends on preference homogeneity (γ).

Note that for SDTFs, preferences are homogenous by definition (highest possible value of γ). The more donors there are, the less homogeneous their preferences will be, other things equal. Hence, γ negatively depends on α, and $\gamma(\alpha = 0) = \gamma^{\max}$. Since the direct effect of α on U_i^f is positive, while its indirect effect (through γ) is negative, the optimal trust fund may be of intermediate size. Whether this is the case or whether the optimum is at the extremes (if the fund is attractive only for a single donor or, conversely, for a very high number of donors) depends on the "weight" given to burden sharing relative to preference homogeneity $c(x_i^f)$, where x_i^f reflects the specific characteristics of the fund (e.g., area of activity and country or region covered implying different risk sharing opportunities), and of the individual donor (e.g., donor seeking global leadership role versus small donor using the multilateral organization primarily to compensate the lack of own administrative capacities).

As it appears implausible that for a given combination of fund and donor characteristics, the utility peaks at different levels of α, we assume that $U_i^f(\alpha)$ is unimodal.

Finally, we assume that the donor does not benefit from funds that are financed only by other donors, as their development outcomes will be attributed only to members of those funds. This assumption is broadly in line with the donors' strong concern for visibility that is one of the most important general drivers of multi-bi aid according to a survey carried out by the OECD/DAC Secretariat (Tortora and Steensen 2014).[5]

Let trust fund membership be denoted by an indicator variable M_i^f, with $M_i^f = 1$ if donor i is a member of trust fund f, and $M_i^f = 0$ otherwise. The utility of donor i from trust fund f is then given by:

$$U_i^f = \begin{cases} U_i^f(\alpha^f, \gamma(\alpha^f), c(x_i^f)) & \text{if} \quad M_i^f = 1, \\ 0 & \text{if} \quad M_i^f = 0. \end{cases} \tag{1}$$

Donor i decides about membership in any given fund by considering the utility this fund will provide to it, subject to a budget constraint that limits its multi-bi contributions to $\bar{M}_i$ (i.e., the overall aid budget net of the resources required for bilateral and multilateral commitments). For simplicity, we assume that donor i contributes an equal amount (say, 1 unit) to each trust fund in which it participates. Then, $\bar{M}_i$ also reflects the maximum number of trust funds the donor can participate in.

Let F be the overall number of possible trust funds a donor might create or join.[6] The optimization problem then becomes:

$$\max_{M_1,\ldots,M_F} \sum_{f=1}^{F} U_i^f \quad \text{s.t.} \quad \sum_{f=1}^{F} M_i^f \leq \bar{M}_i \tag{2}$$

The obvious solution is that the $\bar{M}_i$ trust funds providing the greatest utility will be funded. We denote the utility of the marginal fund the donor will become a member of (i.e., the $\bar{M}_i$-best fund) as $\bar{U}_i$. We abstract from the case that two or more funds would have exactly the same utility. Then the optimal participation decision for each individual fund is given by:

$$M_i^f = \begin{cases} 1 & \text{if} \quad U_i^f \geq \bar{U}_i, \\ 0 & \text{if} \quad U_i^f < \bar{U}_i. \end{cases} \tag{3}$$

For illustrative purposes, let us assume for the moment that $\bar{U}_i$ is fixed. This allows us to graphically demonstrate the implications of our model. Figure 2 shows $U_i^f(\alpha)$ for three

[5] We acknowledge that this assumption is an oversimplification, as the typical donor in reality is likely to be somewhat altruistic and obtain some utility from favorable development outcomes produced without its involvement.

[6] For purposes of this illustrative model, we take other donors' participation decisions as given.

different constellations $c(x_i^f)$. Simplifying notation by suppressing the sub- and superscripts i and f, we can focus on these three constellations, say A, B, and C. The function $U_A(\alpha)$ (solid line) shows potential trust fund options that vary only in the number of participating donors α, and are otherwise fully identical (all corresponding to fund and donor characteristics in constellation A). In the illustration, $\bar{U}$ is fixed at 2.5 (dotted line). In this setting, under constellation A, neither a SDTF nor a large MDTF would be attractive, but the utility of membership would be above the threshold for a number of other donors between one and four.

Now imagine that the context changes, for instance because the funds are proposed to support development in very risky environments, such as post-conflict states. In such a situation, the potential for risk sharing among donors dominates the negative impact of additional donors on preference homogeneity, for any plausible number of donors.[7] This is reflected in a different $c(x)$, represented by constellation B and the respective utility function $U_B(\alpha)$ in Figure 2 (dashed line, large dashes). $U_B(\alpha)$ is at or above the threshold value of $\bar{U}_i$=2.5 for at least four other donors.

Finally, in constellation C, the situation is such that even with just one other donor, preference heterogeneity is sufficiently extreme (and the benefits of burden-sharing sufficiently minor) that membership is unattractive. Only in the case of a SDTF is utility $U_C(\alpha)$ (small dashes) sufficiently high to make the fund attractive for membership. In a case such as this one there may be important geopolitical or trade interests at stake for the donor, with the trust fund channel used to avoid administrative costs or to take advantage of expertise the donor agency does not possess.

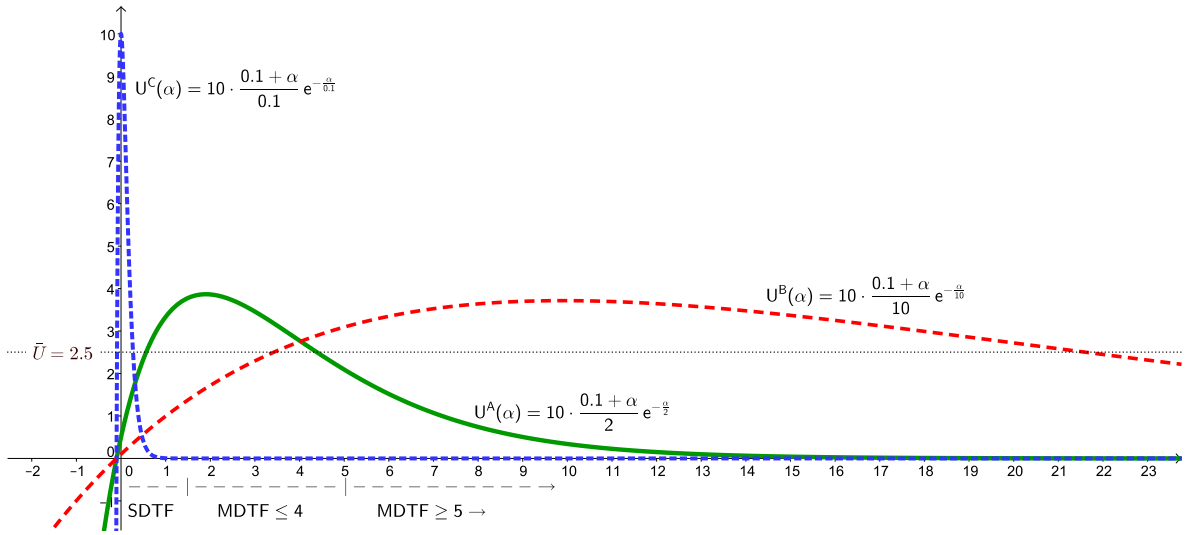
It becomes clear that the decision to enter any individual trust fund depends on the number of other donors, the specific characteristics of the fund and the donor ($c(x)$ summarized here in constellations A, B, and C), and the complex interaction of the two that work through the direct effect of α on burden sharing versus the indirect effect of α via preference homogeneity. The Annex provides a detailed analysis of participation decisions following the implications of the model. As the examples there demonstrate, specific characteristics of donors and trust funds $c(x)$ have a different impact on the membership decision depending on whether a SDTF, a small MDTF, or a large MDTF are the possible options. In the following, we will look into these characteristics more closely, and derive testable hypotheses for the link between these characteristics and the participation decisions of bilateral donors for the different fund types.

4 Hypotheses and operationalization

The country and fund characteristics that may be relevant in driving a donor's participation decision have already been discussed in a range of illustrative examples above. Their impact depends on their role for preference homogeneity on the one hand, and burden sharing on

[7] Note that the OECD/DAC membership counted 22 members – including all traditional donor countries (and a few others) – during most of our period of analysis. Hence, trust funds of about size 20 are the largest possible funds one should imagine here.

Figure 2: Comparing the utility of differently sized trust funds for different constellations (A, B, C)



Notes: The concrete utility function used for this figure is $U(\alpha, \gamma(\alpha), c(x)) = f(\alpha, c) \cdot \gamma(\alpha, c)$, whereby $f(\alpha, c) = 10 \cdot \frac{0.1+\alpha}{c}$, and $\gamma(\alpha, c) = e^{-\frac{\alpha}{c}}$. This is in line with the required properties formulated above, $f'(\alpha) > 0, \quad U'(\gamma) > 0, \quad \gamma'(\alpha) < 0$, and $U(\cdot)$ is unimodal. Moreover, for the parameter of preference homogeneity we have $\gamma(\alpha = 0) = \gamma^{\max} = 1$ (for SDTFs), and $\lim_{\alpha \to \infty} \gamma(\alpha) = 0$.
$c(x)$ enters as a factor that increases preference homogeneity γ for any given number of donors. More generally, it scales down the effect of α in a way that for high α the reduction in preference homogeneity is mitigated, which reflects a stronger emphasis on burden sharing. The three constellations are presented using $c = 2$ (constellation A), $c = 10$ (constellation B, strong role of burden sharing), and $c = 0.1$ (constellation C, emphasis on the loss of preference homogeneity).
As α is discrete rather than continuous, the solidly drawn lines are not exactly correct, but allow us to better distinguish the shape of $U(\alpha)$ across the three constellations.

the other hand. We will now examine these factors more systematically, and discuss their respective impact on the donor's tradeoff between preference matching and burden sharing when choosing among trust fund types.

In some areas, donor preferences differ considerably, while in others, they are much more aligned. In the latter case, adding additional donors to a trust fund should not substantially decrease preference homogeneity. Donors can hence benefit from the advantages of burden sharing without incurring strong losses from a dilution of focus within the fund or the risk that the fund's objectives will move away from the preferences of each of the individual trust fund members. The most straightforward way to look at preference homogeneity between donors is to consider the differences in their allocation of bilateral aid. These differences appear in the weight given to individual sectors in each donor's bilateral aid portfolio. If all donors provide a similar share of bilateral aid to a sector, we consider that interests in this area are relatively homogenous. In contrast, a strong variation of bilateral aid shares for a given sector indicates heterogeneity. The stronger the differences in sectoral interests, the less should be the donors' willingness to invest in large trust funds.

Hypothesis 1 Sectoral variation of donor interests predicts increasing participation in

small trust funds as opposed to large trust funds.

We measure preference heterogeneity by calculating the coefficient of variation in the sectoral shares of bilateral aid, for the sector(s) relevant to the respective trust funds, by all donors covered in the OECD/DAC's Creditor Reporting System (CRS) (OECD 2014b).[8] Admittedly, this measure is imperfect as donors may have different preferences over subsectors (such as primary vs. secondary education) within a sector, or about specific goals (such as enrollment vs. quality of schooling). Yet, this method is consistent with other studies that use bilateral aid to measure and compare individual donor preferences (e.g., Lyne, Nielson, and Tierney 2009; Schneider and Tobin 2013) and to measure preference heterogeneity (e.g., Copelovitch 2010).[9]

Note that donor preferences over sectoral allocations may differ even if their aid is motivated purely by development objectives. For ideological or other reasons some donors, for example, may emphasize government provision of education and health services as the crucial path to development while others may emphasize private sector development. However, donors may have differing sectoral preferences for geopolitical or commercial reasons as well. Either explanation is consistent with Hypothesis 1.

Other hypotheses can be more clearly associated with donor motives, whether "donor interest" or "recipient need." As emphasized in the aid allocation literature, the promotion of a donor's commercial and geopolitical interests is often a strong motivation for development assistance. Where such interests are at stake, donors' preferences will tend to differ much more than when their aid is responding to recipient need. In this situation – where donors may compete rather than cooperate with each other – adding more donors to a fund may drastically reduce the benefits to each sovereign donor. Donor competition for trade access or other commercial and geopolitical objectives will be particularly strong regarding aid to middle-income countries (MICs). Compared to low-income countries, recipient need is lower in MICs, and potential commercial benefits to donors are greater. We can thus formulate our second hypothesis:

Hypothesis 2 A donor should channel its support for middle-income countries through small trust funds as opposed to large trust funds.

To group countries into middle-income and other developing countries, we use an indicator variable based on the standard World Bank classification (see World Bank 2014b).

An economic downturn in the donor country can lead to increased emphasis on the use of aid for donor interests and specifically for commercial benefits, rather than for development objectives broadly shared within the donor community. Particularly when unemployment is relatively high in the donor country, combating poverty at home will become more of

[8] See Table A-2 in the Annex for a full definition.

[9] Sectoral preferences are obviously not a comprehensive measure of donor preferences. We considered, but rejected, heterogeneity measures based on bilateral donors' geographic preferences. Many trust funds are global in scope, in contrast to most bilateral aid programs, and for them preference heterogeneity among donors' country allocations is not relevant.

a priority relative to combating poverty overseas. Parliamentarians, voters and interest groups in the donor country may favor earmarking aid more narrowly, so it can potentially be delivered in ways that support job creation or other commercial benefits to the donor country. This argument leads to our third hypothesis:

Hypothesis 3 When donors face increased unemployment, they tend to invest in small trust funds rather than large trust funds.

Unemployment rates (in percent) for all bilateral donors are taken from the World Bank's (2014c) World Development Indicators (WDI).

Some contexts are characterized by increased burden-sharing benefits as well as increased preference homogeneity, particularly when a core set of donors has committed to act upon a certain challenge. For instance, when a topic is discussed at the level of the G8 and commitments are made, one can infer that the issue requires some common action and that there is some commonality of interests among most of the G8 member states.

An example of a trust fund emanating from a G8 summit was the Global Agriculture and Food Security Program (GAFSP) of the World Bank. At the L'Aquila summit in 2009, G8 leaders expressed their concern about hunger and poverty caused by soaring food prices, lack of investment, and the burgeoning global financial crisis. Recognizing the "urgent need for decisive action", they promised to "[...] partner with vulnerable countries and regions to help them develop and implement their own food security strategies, and together substantially increase sustained commitments of financial and technical assistance to invest in those strategies" (G8 2009). A number of international organizations including the World Bank attended the summit and endorsed the statement of the G8. In total, leaders pledged USD 22 billion for food security over three years. USD 800 million were ultimately committed to GAFSP, which was established one year after the L'Aquila summit (G8 2010).

This example demonstrates that issues adopted at G8 summits typically imply a strong consensus among the G8 leaders. This alignment of preferences may catalyze joint funding for initiatives addressing common-priority development problems.

Hypothesis 4 Trust funds related to topics discussed at the level of the G8 should lead to small or even large multi-donor funds rather than single-donor trust funds.

We measure trust funds' relevance to the G8 by donors' commitments at preceding summits. Specifically, for each trust fund, we count the number of its sectors for which pledges were made at the G8 summit in the year prior to trust fund activation.

The salience of donor cooperation is even more evident when it comes to addressing global public goods such as climate change or the spread of communicable diseases. Activities in these areas benefit all donors and often require a large common effort to move things forward. Hence cooperation among many donors appears as the most effective form of intervention:

Hypothesis 5 A contribution to global public goods will be most attractive in the form of large multi-donor trust funds.

We use an indicator variable for global activities that is based on the World Bank's own classification of trust fund activities (World Bank 2014b).

Finally, when the activities of the fund are perceived as high-risk, cooperation among multiple donors allows the risks to be shared. Even if the expected impact of the program overall is positive, some specific projects may fail. When many donors contribute, the project portfolio can be larger and more diversified, hence reducing the overall risk of failure. Moreover, it may be politically useful for individual donors to share the responsibility if individual projects turn out to be problematic. Risk sharing is particularly relevant in the context of fragile states, e.g., post-conflict states such as Afghanistan, or countries having experienced major natural disasters. In this context, cooperation of many donors should therefore increase the utility of each. Assistance to fragile and post-conflict states is also likely to be an area where donors have strong common interests, as instability, conflict, and insecurity are problems that tend to spill across borders.

Hypothesis 6 A contribution to activities in support of fragile states will be most attractive in the form of large multi-donor trust funds.

A binary indicator variable for whether a trust fund supports fragile states can be drawn directly from the World Bank's (2014b) trust fund database.

5 Empirical analysis

We test these hypotheses using a dataset of all World Bank trust funds (either IBRD/IDA or IFC trust funds) that received at least one contribution within fiscal years 2002-2013 (World Bank 2014b). This is the longest time span for which donor participation information is systematically available. The donors considered are the 24 DAC member countries for which information on trust fund membership and a range of key predictors are available. The dependent variable is a binary indicator reflecting the participation of each individual donor i in fund f (see equation 3).[10] Trust funds were created in different years, and the corresponding year effects can be controlled for, but note that we do not have panel data since each fund is observed only once. We run the estimations separately for SDTFs, small MDTFs, and large MDTFs, using robust linear probability models with standard errors clustered at the level of donor countries.[11] However, we consider that the decisions are not taken independently of each other. Possible correlations of errors across equations are taken into account using seemingly unrelated estimation with unbalanced equations, a

[10] We also considered using contribution amounts for a robustness check, but the necessary data are not available.

[11] As already noted above, we cannot estimate a full-fledged choice model in the spirit of the decision tree in Figure 1 because the data have different units of analysis. This also precludes a Heckman model for potentially correlated sequences of decisions. However, our data allow us to include control variables for factors that indicate the use of pure bi- or pure multilateral aid as an alternative to multi-bi aid. Assuming that all relevant factors are observable, this should solve the selection problem.

method that uses a common variance-covariance matrix for the different regressions.[12] The observation numbers across equations are unbalanced because the World Bank managed far more SDTFs than MDTFs over the 2002-2013 period. Robust estimation can flexibly handle this lack of balance. To test our hypotheses, we conduct Wald tests to compare coefficients across equations.

For each block of three regressions corresponding to the three categories of funds, we use exactly the same specification. The first block includes only six variables corresponding to the six hypotheses listed above, without fixed effects or other controls. The second block includes fixed effects for donor countries and for trust fund starting years.[13] The third block adds more controls, including variables related to bi- and multilateral aid as alternative funding options to multi-bi aid as a whole. Moreover, they include a variety of indicators capturing the (development-related and general) know-how and capacity of the donor country. Such capacity should generally reduce the need to use the multilateral channel. Finally, we include a binary indicator variable for particularly contentious issues, as identified from a small expert survey carried out within the World Bank (2013b). Creating a trust fund pertaining to one of these issues allows donors to circumvent lengthy or divisive debates within a multilateral's decision-making body, where not only the big traditional donors but also MICs have an influential voice. All variables and their sources are described in more detail in the Annex, Tables A-2 and A-5.

In the Annex, we also show a replication of the same regressions for different definitions of small versus large MDTFs. Because the cutoff point is somewhat arbitrary, we should be able to confirm that a small change will not substantially affect our results. In addition to the cutoff between 4 and 5 donors used so far, Tables A-3 and A-4 present estimations for cutoffs between 6 and 7, and between 10 and 11 donors. Given that few funds comprise many more than 10 members, the latter is already a relatively big step that tends to blur the distinction between the two categories. The outcomes are generally in line with these expectations.

Another important methodological issue is the definition of the choice set. In line with the model, all possible trust funds should be considered here. However, information is available only for trust funds that actually exist. To generate the full data set, we proceed with two alternative assumptions. First, we assume that within each group of trust funds (SDTFs, small MDTFs, and large MDTFs), any fund that is used by at least one of the bilateral donors could have been chosen by any other donor too (choice set A). As an example, when Switzerland agrees with the World Bank on a SDTF in any specific area, we assume that any other donor could have made the same kind of arrangement. Similarly, if there is a MDTF in a given area, we assume that those donors that do not participate in this fund would in principle also have had the option to do so.

Second, we assume that beyond the choices included in choice set A, for all funds that exist in the form of one particular fund type, the two other fund types would also have been

[12] We employ the *suest* routine for STATA to run these estimations (McDowell 2004). This approach also follows the standard guidance on the estimation of fixed-effects panel data systems (Blackwell 2005).

[13] A Hausman test indicates that random effects specifications would lead to inconsistent coefficients.

possible (choice set B). This implies, for example, that a specific SDTF that the Netherlands used to channel money through the World Bank could have been set up alternatively as a small or large MDTF. This greatly increases the number of observations in the sample by adding further zeros for non-membership (since many of the potential funds never came into existence in reality). It is not clear a priori which choice set is more plausible in practice.

Tables 1 and 2 show the results for choice sets A and B respectively. As expected, the larger the variation in bilateral sectoral aid preferences, the lower is the propensity of any donor to contribute to large MDTFs. This result is robust across specifications. In Table 1, an increase in the coefficient of variation by one standard deviation leads to a 4 percentage points decrease in the probability that any given donor joins such a large fund, whether or not fixed effects or control variables are included. Wald tests (Table 3) confirm that differences in the effects of preference homogeneity on the likelihood of joining large-n funds versus small-n funds (small MDTFs or SDTFs), are statistically significant.

Coefficients on preference heterogeneity are similarly signed, and statistically signficant, in Table 2. Coefficient magnitudes are much smaller, however, due to the much larger number of observations in choice set B. For large MDTFs, the sample size increases tenfold, with the addition of numerous observations for potential funds that did not come into existence. This addition reduces the baseline probability for being a member of any of these multiple potential funds to about one tenth of its initial value. A similar reduction in coefficient magnitudes is a normal consequence of this reduction in the mean of the dependent variable, and thus consistent with the results of Table 1. As shown by Table 4, Wald tests again confirm the distinctiveness of large-n funds as compared to small-n funds.

The hypothesis that aid for middle-income countries tends to be motivated by donor-specific interests – and should hence lead to the use of SDTFs rather than MDTFs – is only partially supported. Results in Table 1 are mostly supportive, but not those in Table 2 based on the larger choice set B. For this MIC-assistance indicator, the outcome thus hinges on the beliefs about the more appropriate option space for bilateral donors. If we believe that choice set A is more appropriate (because, for instance, the multilateral agency might not be willing to offer trust funds of all types in all areas), then the results indicate that a large MDTF has a (9 percentage points) lower probability of receiving contributions from any donor if it targets MICs. In general, a focus on MICs tends to reduce the likelihood a fund receives contributions, but this effect is significantly increased for large MDTFs. Wald tests for choice set A show significant differences across all fund type comparisons except between SDTFs and small MDTFs (Table 3). For choice set B, we cannot confirm our hypothesis as all cross-equation coefficient differences are insignificant (Table 4).

Table 1: Main regressions using Choice set A

	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5
Preference heterogeneity	-0.005	-0.0003	-0.159***	-0.003	-0.011	-0.159***	-0.004	-0.002	-0.171***
	(0.005)	(0.017)	(0.042)	(0.006)	(0.017)	(0.040)	(0.007)	(0.020)	(0.043)
Middle-income country assistance	-0.001	-0.005	-0.088***	-0.001	-0.004	-0.087***	0.001	-0.008	-0.090***
	(0.003)	(0.010)	(0.019)	(0.003)	(0.010)	(0.019)	(0.003)	(0.011)	(0.021)
Unemployment rate	-0.005***	-0.010***	-0.016***	0.005	0.045**	-0.017	0.009	0.040**	-0.013
	(0.000)	(0.001)	(0.003)	(0.005)	(0.019)	(0.033)	(0.007)	(0.021)	(0.048)
Number of G8 summit pledges	-0.002	0.011**	0.0002	-0.002	0.005	0.024**	-0.003	0.003	0.017
	(0.002)	(0.005)	(0.010)	(0.002)	(0.006)	(0.012)	(0.003)	(0.007)	(0.013)
Global activity	-0.005*	0.014	0.105***	-0.005*	0.019**	0.112***	-0.008**	0.023**	0.125***
	(0.003)	(0.009)	(0.018)	(0.003)	(0.009)	(0.017)	(0.004)	(0.010)	(0.019)
Fragile state assistance	-0.007**	-0.006	0.055***	-0.008**	-0.005	0.072***	-0.009**	0.002	0.068***
	(0.004)	(0.010)	(0.019)	(0.003)	(0.010)	(0.019)	(0.004)	(0.011)	(0.022)
Logarithm of GDP							-0.005	0.045	0.219
							(0.046)	(0.180)	(0.317)
Logarithm of bilateral aid							-0.015	-0.104	0.134
							(0.025)	(0.081)	(0.147)
Multilateral aid (% of total aid)							-0.038	0.382	-0.700
							(0.185)	(0.549)	(1.227)
Administrative costs (% of bilateral aid)							-0.011	-0.035*	0.061
							(0.007)	(0.019)	(0.068)
Researcher density							-0.006**	0.023**	-0.027
							(0.003)	(0.010)	(0.019)
Logarithm of R&D expenditure							0.091***	-0.115	0.248*
							(0.020)	(0.070)	(0.132)
Government quality							-0.042	-0.198	-0.340
							(0.055)	(0.220)	(0.366)
DAC (co)chair							-0.005	-0.005	0.068**
							(0.005)	(0.016)	(0.032)
Contentious issue							0.003	0.019	-0.001
							(0.004)	(0.014)	(0.026)
_cons	0.074***	0.148***	0.520***						
	(0.006)	(0.019)	(0.044)						
Donor fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Year fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Observations	23075	5007	3101	23075	5007	3101	18195	4067	2624
Percent correctly predicted positives	77.4	73.1	65.3	83.3	80.6	79.9	87.5	85.3	81.3
Percent correctly predicted negatives	40.7	42.3	51.4	59.8	62.6	60.0	43.7	48.5	51.1
Cutoff	0.034	0.083	0.324	0.034	0.083	0.324	0.034	0.083	0.324

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 2: Main regressions using Choice set B

	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5	SDTF	MDTF≤ 4	MDTF≥5
Preference heterogeneity	-0.004	0.004	-0.028***	-0.004	0.002	-0.023***	-0.005	0.002	-0.024***
	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)	(0.005)	(0.005)	(0.004)	(0.006)
Middle-income country assistance	-0.002	0.0002	0.005**	-0.002	0.001	0.005*	-0.001	0.002	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
Unemployment rate	-0.003***	-0.002***	-0.002***	0.003	0.007**	-0.001	0.006	0.009**	-0.003
	(0.000)	(0.000)	(0.000)	(0.004)	(0.003)	(0.004)	(0.005)	(0.004)	(0.006)
Number of G8 summit pledges	-0.003**	0.004***	0.007***	-0.002	0.003**	0.007***	-0.003	0.002	0.008***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)
Global activity	-0.010***	0.007***	0.058***	-0.009***	0.006***	0.059***	-0.011***	0.006***	0.065***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Fragile state assistance	-0.009***	0.005***	0.023***	-0.008***	0.004**	0.023***	-0.009***	0.007***	0.022***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
Logarithm of GDP							-0.007	0.019	0.006
							(0.035)	(0.026)	(0.040)
Logarithm of bilateral aid							-0.012	-0.014	0.031
							(0.018)	(0.014)	(0.021)
Multilateral aid (% of total aid)							-0.039	0.129	-0.081
							(0.134)	(0.100)	(0.151)
Administrative costs (% of bilateral aid)							-0.009*	-0.007*	0.010*
							(0.005)	(0.004)	(0.005)
Researcher density							-0.006***	0.005***	-0.001
							(0.002)	(0.002)	(0.002)
Logarithm of R&D expenditure							0.081***	-0.036***	0.021
							(0.015)	(0.011)	(0.017)
Government quality							-0.023	-0.041	-0.005
							(0.042)	(0.031)	(0.048)
DAC (co)chair							-0.004	-0.004	0.003
							(0.004)	(0.003)	(0.004)
Contentious issue							0.005*	-0.002	-0.005
							(0.003)	(0.002)	(0.003)
_cons	0.058***	0.017***	0.043***						
	(0.004)	(0.003)	(0.005)						
Donor fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Year fixed effects	no	no	no	yes	yes	yes	yes	yes	yes
Observations	31183	31183	31183	31183	31183	31183	24886	24886	24886
Percent correctly predicted positives	81.7	74.2	51.0	83.5	87.5	71.9	87.9	90.4	77.5
Percent correctly predicted negatives	39.6	39.0	55.2	60.3	50.0	48.0	45.0	38.6	36.9
Cutoff	0.025	0.013	0.031	0.025	0.013	0.031	0.025	0.013	0.031

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table 3: Wald tests corresponding to Table 1

(1)		SDTF	SDTF	MDTF≤4	SDTF	SDTF	MDTF≤4	SDTF	SDTF	MDTF≤4
(2)		MDTF≤ 4	MDTF≥5	MDTF≥5	MDTF≤ 4	MDTF≥5	MDTF≥5	MDTF≤ 4	MDTF≥5	MDTF≥5
Preference heterogeneity	+	-0.005	0.154***	0.159***	0.008	0.155***	0.148***	-0.002	0.167***	0.169***
Middle-income country assistance	+	0.044	0.087***	0.083***	0.027	0.086***	0.084***	0.009	0.091***	0.082***
Unemployment rate	+	0.005**	0.011	0.006	-0.040	0.021	0.061**	-0.031	0.221	0.053*
Number of G8 summit pledges	-	-0.013***	-0.003	0.011	-0.007	-0.026***	-0.019*	-0.006	-0.020**	-0.014
Global activity	-	-0.019**	-0.110***	-0.091***	-0.024**	-0.117***	-0.093***	-0.030***	-0.132***	-0.102***
Fragile state assistance	-	-0.001	-0.063***	-0.061***	-0.003	-0.080***	-0.077***	-0.011	-0.076***	-0.066***

Note: For each variable shown in the first column, cell entries show the difference in coefficients across equations indicated by the column headers ($\beta_{(1)} - \beta_{(2)}$ for any coefficient β), along with the significance of a one-sided t-test (expected direction of effect shown to the right of each variable).

Table 4: Wald tests corresponding to Table 2

(1)		SDTF	SDTF	MDTF≤4	SDTF	SDTF	MDTF≤4	SDTF	SDTF	MDTF≤4
(2)		MDTF≤ 4	MDTF≥5	MDTF≥5	MDTF≤ 4	MDTF≥5	MDTF≥5	MDTF≤ 4	MDTF≥5	MDTF≥5
Preference heterogeneity	+	-0.009	0.023***	0.032***	-0.006	0.019***	0.025***	-0.008	0.018***	0.026***
Middle-income country assistance	+	-0.002	-0.007	-0.005	-0.003	-0.006	-0.004	-0.003	-0.003	-0.001
Unemployment rate	+	-0.002	-0.002	-0.0003	-0.003	0.005	0.008	-0.002	0.009*	0.011
Number of G8 summit pledges	-	-0.007***	-0.010***	-0.003**	-0.005***	-0.010***	-0.005**	-0.005***	-0.011***	-0.006**
Global activity	-	-0.016***	-0.067***	-0.051***	-0.015***	-0.068***	-0.053***	-0.017***	-0.076***	-0.060***
Fragile state assistance	-	-0.014**	-0.032***	-0.018***	-0.013**	-0.032***	-0.019***	-0.017***	-0.031***	-0.015***

Note: For each variable shown in the first column, cell entries show the difference in coefficients across equations indicated by the column headers ($\beta_{(1)} - \beta_{(2)}$ for any coefficient β), along with the significance of a one-sided t-test (expected direction of effect shown to the right of each variable).

Coefficient estimates for unemployment are the only ones within each choice set that are highly sensitive to the inclusion of fixed effects and other controls. In the very simple models without fixed effects or controls, these coefficients capture, to a large extent, pure cross-sectional variation. Our hypothesis, however, is not related to the base level of unemployment (associated with structural problems of the economy that cannot be addressed effectively through multi-bi aid), but to temporary downturns of the economy that may lead donor country governments to use their foreign policies to signal their concern for increasing employment. This reasoning is supported by regressions that control for donor fixed effects. When the cross-sectional variation is controlled for by the fixed effects (with or without additional controls), the coefficients turn positive and partly significant in both choice sets for the smaller two fund types. While this pattern of coefficients is consistent with our hypothesis, Wald tests show that the differences between them are not always significant (Tables 3 and 4).

Prior pledges at the G8 should reflect a common interest of at least some donors in certain sectors. As expected, this variable is associated with increased participation in (small or large) MDTFs as opposed to SDTFs; for the latter, the coefficient is always negative but in most cases insignificant. Results for the G8 variable are statistically significant more often for choice set B than for A. This pattern can also be seen from the corresponding Wald tests (Table 4), which indicate positive and significant effects of G8 pledges at each step, moving from SDTFs to small MDTFs to large MDTFs.

An even more robust relationship is observed between global activities and trust fund participation. In line with our hypotheses, no matter the specification and the choice set considered, trust funds supporting global public goods provision tend to include multiple donors. The probability of participating in a large MDTF increases by more than 10 percentage points in choice set A (6 or 7 percentage points in choice set B) if it funds global activities. This effect is significantly larger than the corresponding effect on small MDTFs funds (1 or 2 percentage points in choice set A; 0.6 or 0.7 percentage points in choice set B), which is in turn significantly higher than for SDTFs (negative coefficients, not significantly different from zero). All differences across trust fund types are strongly significant, as shown by Wald tests in Tables 3 and 4.

Results are similarly strong for trust funds with a focus on fragile states, which tend to take the form of large MDTFs, consistent with the view that risk sharing is an important consideration for these funds. For funds supporting fragile states, the propensity to become a member increases by 6 or 7 percentage points in choice set A if it is a large MDTF, and by 2.2 or 2.3 percentage points in choice set B. According to the Wald tests, differences across all fund types are significant in choice set B (Table 4), while the test cannot establish significance for the smaller two fund types in choice set A (Table 3).

Overall, these tests mostly support our hypotheses. Results for preference heterogeneity (as measured from bilateral sectoral allocations) and the indicator variables for global activities and fragile states are particularly robust. We also have a tentative explanation for why some relationships do not turn out as strongly as expected. In reality, the type of fund chosen by a donor not always allow us to infer its actual motivation. On the one

hand, donors sometimes are bound by legal rules to channel their support to an SDTF even in a multi-donor partnership. On the other hand, while individual donors cannot legally earmark specific activities in MDTFs, they sometimes use "notional earmarking" to indicate priority areas that the agency seeks to accommodate whenever possible. Our data cannot tell whether any of these situations are present, but our qualitative evidence suggests that they are rare. In statistical terms, these cases imply measurement error in the respective fund category and attenuation bias on the related coefficients. Moreover, comparisons across fund types tend to appear less significant. As both effects work against finding support for our hypotheses, our coefficients can be seen as 'lower bounds' on the true effect size.

Results for the control variables provide some support for the plausibility of the overall specification. We begin with donor resource variables, which are rarely significant in our tests. Donor wealth as measured by the log of GDP tends to be associated with reduced participation in SDTFs but increased participation in both small and large MDTFs. The coefficient on the log of bilateral aid tends to be negative for the first two types of funds, but positive for large MDTFs, suggesting that smaller trust funds may be closer substitutes with bilateral aid. The share of multilateral aid in total aid is mostly insignificant.

The coefficient estimate for the share of administrative costs (as a percentage of bilateral aid) is negative and sometimes significant for small funds, in contrast to large MDTFs where it is positive. A higher administrative cost share may imply greater capacity (in terms of staff and expertise) for the donor, reducing the need to delegate administrative tasks such as concrete project identification and monitoring to the multilateral agency. However, donors with greater capacity may be more willing and able to exercise influence over multilateral agencies through trust funds. Neither of these potential effects, one positive and the other negative, appears in our tests to predominate.[14]

We also control for a specific measure of donor expertise or intellectual leadership, namely service by the donor as a chair or co-chair of DAC working parties related to the topic of the fund. As expected, such a role within the DAC is positively related to participation in large MDTFs, although the coefficient is significant only in choice set A. Two broader proxies for capacity do not show any clear relationship with trust fund participation. The number of researchers per 100 workers, and the log of total expenditures on research and development, have opposing effects when included together, and neither is significant when only one of them is included (latter result not shown in tables). A subjective measure of quality of the government bureaucracy in the donor country (from the International Country Risk Guide) is also insignificant. These are admittedly rough proxies: they do not specifically measure research on development and aid, or bureaucratic quality for the government's aid agencies.

Our final control variable that identifies particularly contentious issues within the World Bank does not show the expected positive effect on multi-bi aid in general. The coefficient for the contentious issues indicator is generally insignificant for MDTFs, and positive (and marginally significant) in the SDTF regressions in choice set B. These findings suggest that

[14] Although the aid variables including administrative costs are lagged, they are likely endogenous, so we include them only as control variables in robustness tests, and caution against over-interpreting their estimated coefficients.

these topics may be contentious not only among World Bank members as a whole, but also among donors. The contentious issue variable may then be acting as, in effect, a second indicator of preference heterogeneity among donors, supplementing the main indicator that is based on bilateral sector allocations.

Our main findings from regressions with the smaller set of control variables are highly robust to including this larger set of controls. They are also unaffected by using different estimation techniques. In another robustness check, we performed conditional logit estimations, to account for the binary nature of the dependent variable. In these tests, the direction and significance of all effects of interest were virtually unaffected.[15]

6 Conclusion

Existing studies of donors' institutional choices focus on their allocations between bilateral and multilateral aid, or their allocations among multilateral agencies. This paper analyzes the multiple choices between bilateral and multilateral aid. These choices matter in terms of both aid volumes and numbers of funds, which have increased dramatically since the early 1990s. For bilateral donors, trust funds can combine some of the advantages of the two conventional types of aid. Donors retain more control than with contributions to core multilateral funds such as IDA, particularly in the case of SDTFs. On the other hand, trust funds carry some of the burden sharing benefits of participation in multilaterals, particularly for larger MDTFs.

In an illustrative theoretical model, we show the individual donor choices under different external conditions regarding the (thematic and geographic) area of intervention, and the economic situation in the donor country. Based on a seemingly unrelated regression analysis of the World Bank's trust fund database over the last decade, we find that preference homogeneity among donors, as well as indicators for global activities and fragile states assistance (all cases where burden sharing is important) increase the donor's willingness to opt for (large) MDTFs. In contrast, donors tend to prefer SDTFs when and where their national (e.g., commercial) preferences tend to predominate (e.g., aid to MICs, and when unemployment rates are increasing). While they could use bilateral aid for the same purpose, channeling funds through multilateral agencies lets them benefit from the agency's expertise and reduce administrative cost, particularly in areas where their own capacity is limited. While our rough proxies for donor capacity generally were not significant in our tests, capacity (along with other donor-specific effects) differences are controlled for by the donor fixed effects included in some of our specifications.

Certain trends suggest that donors' reliance on trust funds may continue to increase. These trends include the growing importance of climate change and other global public goods issues, and budget-related capacity reductions in bilateral aid agencies. Reforms in the IFIs that gradually reduce the vote shares of developed country donor governments may increase conflict in the IFIs' formal decision-making bodies, and hence increase the case for

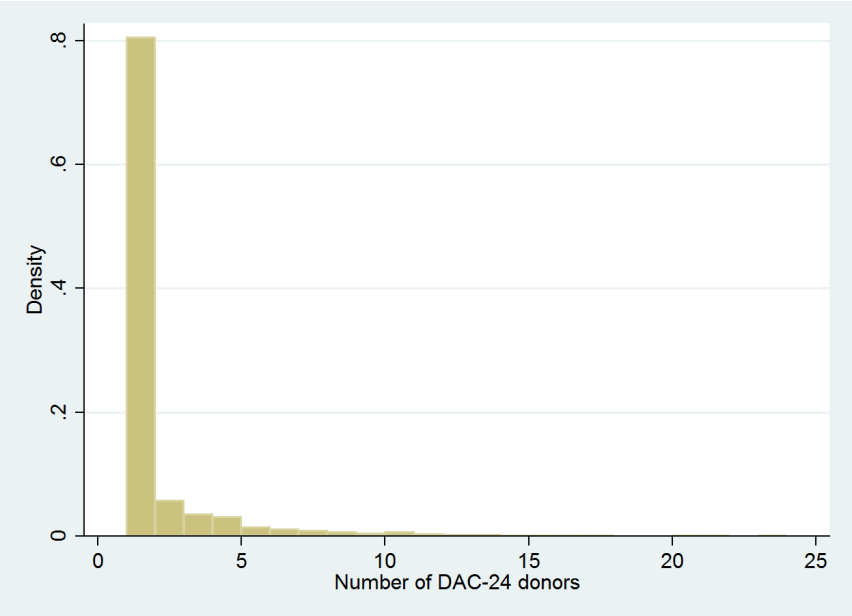
[15] Results can be obtained from the authors upon request.

trust funds. The UNDP example is pertinent here: it relies far more on trust funds than the World Bank does, and it is likely no accident that traditional donors control only one-third of the votes on UNDP's Executive Board responsible for expenditure decisions on "core" funds (OECD 2011: 57).

The continued growth in multi-bi aid reinforces the importance of reforming trust funds at the World Bank and other multilaterals to improve efficiency, and of encouraging further research on the benefits and costs of different types of trust funds to help guide these reforms. In recent years the World Bank has attempted to reduce the proliferation of trust funds, to manage transactions costs and to facilitate integration of trust funded programs and projects into comprehensive country and sector strategies. The minimum size of trust funds was increased from $200,000$ to $1,000,000$ in 2007, and increased further to $2,000,000$ in 2013.

Reforms at the World Bank have also attempted to reduce the number of SDTFs relative to MDTFs, reflecting concerns that SDTFs contributed disproportionately to fragmentation, imposed higher transactions costs, and that donors of SDTFs retained tighter control over decision-making (IEG 2011: 45). Figure 3 shows the number of trust funds within the World Bank over the 2002-2012 period, by number of member countries in each fund and hence the extent of the potential problem. Over the entire period, SDTFs accounted for 80% of all trust funds, compared to only 8% for large MDTFs, those with at least five donors. By 2011, the MDTF share in the number of funds had risen to 43%, and MDTFs were accounting for 80% of disbursements from trust funds. The merits of this recent trend toward encouraging MDTFs hinge on the ability of the World Bank to fend off attempts to introduce ad-hoc earmarking in MDTFs by certain donors.

Figure 3: Distribution of trust fund sizes by number of donors



Trust fund reforms within the World Bank have also centralized resource mobilization

efforts to some extent, limiting "entrepreneurial" activity on the part of its individual units or staff members. The goal is to reduce transactions costs through improved coordination, and to improve alignment with the strategic priorities of the World Bank, partner countries and donors. Mobilizing trust fund resources in an excessively decentralized way increases the risk that an individual department or staff member may, in exchange for additional funding from donors, agree to undertake activities or administrative procedures that undermine rather than complement core Bank activities and procedures. More centralized decision-making processes are more likely to take full account of all costs and benefits to the organization as a whole.

Our study focuses on donors' choices among different size trust funds, emphasizing the greater burden sharing benefits of larger-n funds vs. the reduced need with smaller-n funds to compromise with other donors with conflicting preferences. The rise of multi-bi aid poses many other questions in need of additional research. For example, to what degree are trust fund resources actually additional to core multilateral financing, at the aggregate or sectoral level? Particularly in the longer term, a donor with preferences far from the median may divert more of its contributions for core multilateral financing toward earmarked contributions. If that donor is then perceived as not contributing its "fair share" of core funds, other donors may reduce their core funding in response. Multilaterals may also shift the composition of their expenditures from core funds in response to large trust funding earmarked for certain sectors popular with donors. After donors provided generous funding for the Education For All Fast Track Initiative (EFA-FTI), for example, the share of primary education in total IDA disbursements on education fell sharply (OECD 2011: 64). As trust funds increase relative to IDA funding, it also raises the possibility that the performance-based allocation of IDA resources could be undermined. Finally, research could examine whether country allocations of trust funds reinforce, counteract, or are neutral with respect to IDA's aid selectivity mechanisms, designed to maximize the development effectiveness of aid and incentivize policy and institutional reforms.

References

Abbott, K. W., & Snidal, D. (1998). Why states act through formal international organizations. *Journal of Conflict Resolution*, *42*(1), 3-32.

Alter, K. J., & Meunier, S. (2009). The politics of international regime complexity. *Perspectives On Politics*, 7(1), 13-24.

Barakat, S. (2009). The failed promise of multi-donor trust funds: Aid financing as an impediment to effective state-building in post-conflict contexts. *Policy Studies,* 30(2), 107-126.

Barakat, S., Rzeszut, K., & Martin, N. (2012). What is the track record of multi-donor trust funds in improving aid effectiveness. *DFID and EPPI-Centre, University of London.*

Bermeo, S. B. (2008). *Foreign aid, foreign policy, and strategic development*. Princeton University.

Berthélemy, J. C. (2006). Bilateral donors' interest vs. recipients' development motives in aid allocation: do all donors behave the same? *Review of Development Economics*, 10(2), 179-194.

Biermann, F., Pattberg, P., Van Asselt, H., & Zelli, F. (2009). The fragmentation of global governance architectures: A framework for analysis. *Global Environmental Politics*, *9*(4), 14-40.

Birdsall, N., Kharas, H. J., Mahgoub, A., & Perakis, R. (2010). *Quality of official development assistance assessment*. Center for Global Development.

Blackwell, J. L. (2005). Estimation and testing of fixed-effect panel-data systems. *The Stata Journal*, 5(2), 202-207.

Browne, S., & Weiss, T. G. (2012). Making change happen: Enhancing the UN's contributions to development, WFUNA Report, World Federation of United Nations Associations, New York, http://www.wfuna.org/resource/making-change-happen-enhancing-the-un%E2%80%99s-contribution-to-development (accessed 28 August, 2014).

Carlsson, J. (2007). Multilateral Development Cooperation in Perspective. Göteborgs Universitet. Perspectives No. 6.

Copelovitch, M. S. (2010). Master or servant? Common agency and the political economy of IMF lending. *International Studies Quarterly*, *54*(1), 49-77.

Dietrich, S. (2013). Bypass or Engage? Explaining Donor Delivery Tactics in Foreign Aid Allocation. *International Studies Quarterly*, *57*(4), 698-712.

Droesse, G. (Ed.). (2011). *Funds for Development: Multilateral Channels of Consessional Financing*. Asian Development Bank.

Dudley, L., & Montmarquette, C. (1976). A model of the supply of bilateral foreign aid. *The American Economic Review*, 66, 132-142.

Eichenauer, V. & Hug, S. (2015). The politics of special purpose trust funds. Paper prepared for presentation at the 2014 PEIO Conference, Berlin, February 12-14.

Eichenauer, V., & Knack, S. (2015). "Bilateralizing" multilateral aid? Aid allocation by World Bank trust funds. Presented at PEIO conference, Berlin, February 12-14.

Eichenauer, V., & Reinsberg, B. (2014). Multi-bi aid: Tracking the evolution of earmarked funding to international development organizations from 1990 to 2012. www.aiddata.org (forthcoming).

Eichenauer, V., & Reinsberg, B. (2015). What determines earmarked funding to international development organizations? Evidence from the new multi-bi aid dataset. Mimeo. University of Zurich.

Forman, S., & Segaar, D. (2006). New coalitions for global governance: the changing dynamics of multilateralism. *Global Governance: A Review of Multilateralism and International Organizations*, *12*(2), 205-225.

Frey, B. S., & Schneider, F. (1986). Competing models of international lending activity. *Journal of Development Economics*, *20*(2), 225-245.

G8 (2009). L'Aquila Joint Statement on Global Food Security: L'Aquila Food Security Initiative (AFSI). L'Aquila, Italy. Available at http://www.g8.utoronto.ca/summit/2009laquila/2009-food.html (Accessed February 1, 2014).

G8 (2010). Muskoka Declaration: Recovery and New Beginnings. Muskoka, Canada. Available at http://www.g8.utoronto.ca/summit/2010muskoka/communique.html (Accessed February 1, 2014).

Graham, E. R. (2015a). Money and multilateralism: how funding rules constitute IO governance. *International Theory*, *7*(1), 162-194.

Graham, E. R. (2015b). Funding Rules in Institutional Design: Explaining Design and Change at the United Nations. Presented at PEIO Conference, Berlin, February 12-14.

Guder, L. (2009). Multi-donor trust funds: Instruments of first choice for post-crisis situations? Development Outreach, 11(1), 36-38.

Gutner, T. L. (2005). Explaining the gaps between mandate and performance: agency theory and World Bank environmental reform. *Global Environmental Politics*, 5(2), 10–37.

IEG (2011). An Evaluation of the World Bank's Trust Fund Portfolio: Trust Fund Support for Development. Independent Evaluation Group. Available http://ieg.worldbankgroup.org/content/ieg/en/home/reports/trust_funds.html (accessed September 1, 2012).

Johnson, T. (2014). *Organizational progeny: why governments are losing control over the proliferating structures of global governance*. Oxford University Press.

Jupille, J., Mattli, W., & Snidal, D. (2013). *Institutional choice and global commerce*. Cambridge University Press.

Kapur, D. (2002). The changing anatomy of governance of the World Bank. In: Pincus, J., & Winters, J. A. (Eds.). *Reinventing the World Bank*. Cornell University Press.

Knack, S., Rogers, F. H., & Eubank, N. (2011). Aid quality and donor rankings. *World Development*, *39*(11), 1907-1917.

Koremenos, B., Lipson, C., & Snidal, D. (2001). The rational design of international institutions. *International Organization*, *55*(4), 761-799.

Linn, J. F. (2009). World Bank Reform: Proposals for the Next G-20 Summit. Prepared for the "London 2009 summit". Washington D.C.: Brookings Institution.

Lyne, M. M., Nielson, D. L., & Tierney, M. J. (2009). Controlling coalitions: Social lending at the multilateral development banks. *The Review of International Organizations*, *4*(4), 407-433.

Maizels, A., & Nissanke, M. K. (1984). Motivations for aid to developing countries. *World Development*, *12*(9), 879-900.

Mahn, T. (2012). The Financing of Development Cooperation at the United Nations: Why more means less. DIE Briefing Paper 8/2012, German Development Institute, Bonn.

Martin, L. L. (1992). Interests, power, and multilateralism. *International Organization*, *46*(4), 765-792.

McDowell, A. (2004). From the help desk: Seemingly unrelated regression with unbalanced equations. *The Stata Journal*, 4(4), 442-448.

McKinlay, R. D., & Little, R. (1977). A foreign policy model of US bilateral aid allocation. *World Politics*, *30*(1), 58-86.

Michaelowa, K., Reinsberg, B., & Schneider, C. (2014). When international organizations delegate: The politics of earmarking European Union aid to multilateral aid institutions. Presented at ECPR General Conference, Glasgow, September 3-6.

Milner, H. V., & Tingley, D. (2013). The choice for multilateralism: Foreign aid and American foreign policy. *The Review of International Organizations*, *8*(3), 313-341.

Morse, J. C., & Keohane, R. O. (2014). Contested multilateralism. *The Review of International Organizations*, 1-28.

OECD (2011). 2010 DAC Report on Multilateral Aid. DCD/DAC(2011)21/FINAL.

OECD (2014b). OECD.StatExtracts: Development. Available at stats.oecd.org (accessed February 12, 2014).

Raustiala, K., & Victor, D. G. (2004). The regime complex for plant genetic resources. *International Organization*, *58*(2), 277-309.

Reinsberg, B. (2015). The implications of multi-bi financing on multilateral agencies: the example of the World Bank. In: Mahn, T., Negre, M., & Klingebiel, S. (Eds.). *Development Cooperation: Fragmentation vs. Pluralism?* (forthcoming).

Reinsberg, B., Michaelowa, K., & Eichenauer, V. Z. (2015). The rise of multi-bi aid and the proliferation of trust funds. In: Mak, A. (Ed.). *Handbook on the Economics of Foreign Aid*. Edward Elgar (forthcoming).

Rixen, T., & Rohlfing, I. (2007). The institutional choice of bilateralism and multilateralism in international trade and taxation. *International Negotiation*, *12*(3), 389-414.

Rohlfing, I. (2009). Bilateralismus und Multilateralismus in den internationalen Beziehungen. Ein polit-ökonomischer Ansatz am Beispiel der Handelskooperation. *Zeitschrift für Internationale Beziehungen*, 75-101.

Schneider, C., & Tobin, J. L. (2013). Portfolio Similarity and the Diversification of Multilateral Aid. Mimeo. University of San Diego.

Sridhar, D., & Woods, N. (2013). Trojan multilateralism: global cooperation in health. *Global Policy*, *4*(4), 325-335.

Thalwitz, M. (2015). Trust funds: Fragmenting aid or a platform for pluralism? In: Mahn, T., Negre, M., Klingebiel, S. (Eds.). *Development Cooperation: Fragmentation vs. Pluralism?* (forthcoming).

The 1818 Society (2012). The Key Challenges Facing the World Bank President: An Independent Diagnostic. April 16. Washington, D.C.

Thompson, A., & Verdier, D. (2013). Multilateralism, Bilateralism, and Regime Design. *International Studies Quarterly*, *58*(1), 15-28.

Tortora, P., & Steensen, S. (2014). Making earmarked funding more effective: Current practices and a way forward, Better Policies for Better Lives Report No. 1, OECD, Paris.

UN (2012). Provisional analysis of funding of operational activities for development of the United Nations system for the year 2011. Department for Economic and Social Affairs, Development Cooperation and Policy Branch, New York.

UNDP (2012). Evaluation of UNDP Partnerships with Global Funds and Philantrophic Foundations. UNDP Evaluation Office. New York.

Weaver, C. (2007). The World's Bank and the bank's world. *Global Governance*, *13*(4), 493-512.

Woods, N. (2005). The shifting politics of foreign aid. *International Affairs*, *81*(2), 393-409.

World Bank (2013a). Trust Fund Annual Report 2012. World Bank Group, Concessional Finance and Global Partnerships Vice Presidency. Washington, D.C.

World Bank (2013b). Identifying politically contested topics at the Bank Expert survey conducted at the World Bank, https://docs.google.com/forms/d/1JIEmuYFsTOPo2mI65jkhQn6icPc1pCty6NiQ0Tk5gX4/viewform (accessed February 12, 2014).

World Bank (2013e). Interview with Concessional Finance and Partnerships Vice Presidency official, July 15, 2013.

World Bank (2014a). 2013 Trust fund annual report. Concessional Finance and Global Partnerships Vice Presidency, Washington D.C.

World Bank (2014b). World Bank trust fund databases, made available by Congressional Finance and Trust Fund Operations Department (Accessed January 10, 2014).

World Bank (2014c). World development indicators. Available at data.worldbank.org (accessed January 2, 2014).

Annex

This Annex presents detailed examples of the implications for trust fund participation decisions of the model sketched out in Section 3.

For each of the three trust fund categories (i.e., SDTF, small MDTF, large MDTF), we can assess the effect of the different constellations (different $c(x)$), allowing us to discuss the model implications without any pre-defined $\bar{U}$. Indeed, since $\bar{U}$ is defined as the utility of the $\bar{M}$-best trust fund, it itself depends on $c(x)$.

Let us stick to the functional form of $U(\cdot)$ chosen for Figure 2. We further assume that the choice set consists of three trust funds, each of them reflecting one of the constellations A, B, or C. Now within each of the constellations, the trust fund proposed could be either a SDTF, a small MDTF, or a large MDTF. Assume $\bar{M}$=2, i.e., two out of three trust funds can be funded. We can go through the 3^3 possible combinations (three constellations combined with three trust fund types) and determine what the choice would be in each case. We will cover three arbitrary examples below; the full set of combinations is presented in Table A-1.

First, we consider the case that for all three constellations, only SDTFs are available (Case 1 in Table A-1). Among these, the donor chooses the trust funds with characteristics C and A. The marginal trust fund is trust fund A with $\bar{U} = U^A$.

As a second example, we consider a case in which for constellation A and B, the available options are small MDTFs, while a SDTF is available for C. In this case the two best options are the funds A and C, and A is again the marginal fund (Case 13 of Table A-1).

In the third example, we again keep the option of a SDTF for C, but propose large MDTFs for the constellations A and B. Again fund C achieves the highest level of utility, but this time, it is followed by fund B, which therefore becomes the marginal fund, so that $\bar{U} = U^B$ (Case 21 of Table A-1).

Table A-1: A simple example to illustrate the model

Case	A	B	C	Funding choice	Marginal fund
1	SDTF	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
2	SDTF	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
3	SDTF	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
4	MDTF≤ 4	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
5	MDTF≤ 4	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
6	MDTF≤ 4	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
7	MDTF≥ 5	SDTF	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^C$ *
8	MDTF≥ 5	SDTF	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$ *
9	MDTF≥ 5	SDTF	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$ *
10	SDTF	MDTF≤ 4	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
11	SDTF	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
12	SDTF	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
13	MDTF≤ 4	MDTF≤ 4	SDTF	M^A=1, M^B=0, M^C=1	$\bar{U} = U^A$
14	MDTF≤ 4	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
15	MDTF≤ 4	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^B$
16	MDTF≥ 5	MDTF≤ 4	SDTF	M^A=., M^B=., M^C=1	$\bar{U} = .$ **
17	MDTF≥ 5	MDTF≤ 4	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
18	MDTF≥ 5	MDTF≤ 4	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
19	SDTF	MDTF≥ 5	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
20	SDTF	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
21	SDTF	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
22	MDTF≤ 4	MDTF≥ 5	SDTF	M^A=., M^B=., M^C=1	$\bar{U} = .$ **
23	MDTF≤ 4	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
24	MDTF≤ 4	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = .$ **
25	MDTF≥ 5	MDTF≥ 5	SDTF	M^A=0, M^B=1, M^C=1	$\bar{U} = U^B$
26	MDTF≥ 5	MDTF≥ 5	MDTF≤ 4	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$
27	MDTF≥ 5	MDTF≥ 5	MDTF≥ 5	M^A=1, M^B=1, M^C=0	$\bar{U} = U^A$

Notes: Donor choices under all possible constellations and all possible types of trust funds available to each donor for an example of 3 donors, 3 funds, and 3 constellations. M^X refers to the funding choice with respect to the proposed fund X, whereas $\bar{U}$ gives the utility of the $\bar{M}$-best fund, or, the marginal fund still being funded.

* (unless MDTF≥ 5 is very large)
** (depends on exact α)

Table A-2: Detailed information on all variables

Variable name	Further explanations and base sources
Dependent variable	
Participation decision	1 whether the donor *ccode* indeed was a donor to trust fund with identifier *trustee* over FY02-FY13 (World Bank 2014b)
Categorical variables	
Single-donor trust fund (SDTF)	Exactly one participating donor (sovereign donor with a positive vote share in the Board); this is a behavioral definition, not a legal definition, as a single donor could set up a trust fund using the legal instrument of a MDTF; the discrepancy is empirically irrelevant; as above, any contribution over FY02 and FY13 will be considered (World Bank 2014b)
Small multi-donor trust fund (MDTF≤4)	More than one sovereign donor participating in the fund, but at most four donors; participation requires at least one positive contribution over FY02-FY13 (World Bank 2014b)
Large multi-donor trust fund (MDTF≥5)	More than four sovereign donors participating in the fund (World Bank 2014b)
Main predictors	
Preference heterogeneity	Coefficient of variation in donor preferences in the sectors underlying the trust fund over the three years before its establishment; donor preferences are given by sector shares in bilateral aid, using data from OECD/DAC Creditor Reporting System (2014b). Formally, the measure computes as follows: For S sectors of a TF, obtain the relative shares s_i (i=1, ..., n). Compute the standard deviation σ_s of the series $\{s_i\}$ and divide by its mean μ. Take the simple average over all S sectors to obtain the heterogeneity measure.
Middle-income country assistance	Trust fund supports middle-income country (World Bank 2014b)
Unemployment rate	Donor unemployment rate (%) in the three years before activation of the trust fund (OECD 2014a)

Number of sectors with G8 summit pledges	Number of sectors of the trust fund in which the international community made a pledge at the G8 summit in the year before activation of the TF (hand-coding available upon request)
Global activity	Trust fund supports global activities; variable *countrygrouping* in the original data set; non-global activities are country-specific activities and regional activities (World Bank 2014b)
Fragile state assistance	Trust fund supports fragile state; variable *fragileflag* in the original data set (World Bank 2014b)
Control variables	
Logarithm of GDP	Gross Domestic Product (GDP), logarithm of constant billion USD value, PPP and output approach, in the three-year period prior to TF creation (OECD 2014a)
Logarithm of bilateral aid	Bilateral aid in the three-year period prior to TF creation (using constant million USD values reported in DAC1) (OECD 2014b)
Multilateral aid (% of total aid)	Multilateral aid in % of total ODA in the three-year period prior to TF creation OECD 2014b, DAC1 table)
Administrative costs (% of bilateral aid)	Administrative costs share in % of bilateral aid in the three-year period prior to TF creation (OECD 2014b, DAC1 table)
Researcher density	Researcher density: Number of researchers per 100 full-time employees, in the three years prior to TF creation (OECD 2014a)
Logarithm of R&D expenditure	Gross domestic R&D expenditure (both private and public), logarithm of constant USD value, in the three-year period prior to TF creation (OECD 2014a)
Government quality	ICRG index on bureaucratic quality of donor country (QoG 2014)
DAC (co)chair	Whether donor held a (co)chair in the relevant OECD/DAC working group in the three years before establishment of the trust fund; relevant working groups are related to the sector underlying the trust fund (e.g., chairmanship in the Peace and

	Governance Working Group was only coded for trust fund assisting fragile states) (hand-coding available on request)
Contentious issue	At least one match in the titles of any of the projects under the fund search string: "hydropower", "rain forest" and "Brazil", "privatization" and "school" (or "education"), "Democratic People's Republic of Korea", or "Cuba"; At least one match with the list of underlying World Bank sectors and themes deemed to be contentious (i.e., hydropower, privatization, anti-terrorism and money laundering); expert survey item was considered contentious if it was judged relative more contentious than not (World Bank 2013b)

Table A-3: Robustness tests with different thresholds using Choice set A

	SDTF	MDTF≤ 6	MDTF≥7	MDTF≤ 10	MDTF≥11
Preference heterogeneity	-0.003	0.002	-0.016	-0.050***	-0.431***
	(0.006)	(0.017)	(0.057)	(0.017)	(0.109)
Middle-income country assistance	-0.001	-0.003	-0.123***	-0.007	-0.140***
	(0.003)	(0.009)	(0.024)	(0.009)	(0.041)
Unemployment rate	0.005	0.027*	-0.010	0.022	0.035
	(0.005)	(0.016)	(0.063)	(0.017)	(0.068)
Number of G8 summit pledges	-0.002	0.007	0.030**	-0.001	0.058**
	(0.002)	(0.006)	(0.014)	(0.006)	(0.023)
Global activity	-0.005*	0.015*	0.126***	0.037***	0.203***
	(0.003)	(0.008)	(0.024)	(0.008)	(0.050)
Fragile states assistance	-0.008**	-0.003	0.067***	0.006	0.126***
	(0.003)	(0.010)	(0.025)	(0.010)	(0.042)
_cons	-0.004	0.047	0.359	-0.364	1.084***
	(0.041)	(0.082)	(1.048)	(0.295)	(0.276)
Donor fixed effects	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes
Observations	23075	6041	2067	7074	1034
Percent correctly predicted positives	83.3	77.7	76.7	77.7	78.0
Percent correctly predicted negatives	59.8	63.6	63.7	62.9	68.7
Cutoff	0.034	0.097	0.401	0.125	0.515

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table A-4: Robustness tests with different thresholds using Choice set B

	SDTF	MDTF≤ 6	MDTF≥7	MDTF≤ 10	MDTF≥11
Preference heterogeneity	-0.004	0.002	-0.030***	0.002	-0.012***
	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Middle-income country assistance	-0.002	0.001	0.004*	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Unemployment rate	0.003	0.007**	-0.001	0.007**	-0.002
	(0.004)	(0.003)	(0.004)	(0.003)	(0.003)
Number of G8 summit pledges	-0.002	0.003**	0.006***	0.003**	0.007***
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)
Global activity	-0.009***	0.006***	0.056***	0.006***	0.043***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Fragile states assistance	-0.008***	0.004**	0.022***	0.004**	0.014***
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)
_cons	-0.051	-0.083	-0.021	-0.083	-0.016
	(0.071)	(0.054)	(0.073)	(0.054)	(0.059)
Donor fixed effects	yes	yes	yes	yes	yes
Year fixed effects	yes	yes	yes	yes	yes
Observations	31183	31183	31183	31183	31183
Percent correctly predicted positives	83.5	87.5	87.5	87.5	95.4
Percent correctly predicted negatives	60.3	49.9	55.1	49.9	49.6
Cutoff	0.025	0.013	0.031	0.013	0.017

Robust standard errors clustered on donors in parentheses. Significance levels: *.1 **.05 ***.01
Cutoffs represent the unconditional means of the dependent variable for each fund type.

Table A-5: Full-sample descriptive statistics

	count	mean	sd	min	max
1 if ccode is donor to TF	52416	0.06	0.24	0.00	1.00
1 if ccode is donor to SDTF	52416	0.03	0.16	0.00	1.00
1 if ccode is donor to MDTF$\leq$ 4	52416	0.01	0.10	0.00	1.00
1 if ccode is donor to MDTF$>$ 5	52416	0.02	0.15	0.00	1.00
Preference heterogeneity	49080	0.84	0.26	0.42	2.67
Middle-income country assistance	49800	0.18	0.38	0.00	1.00
Donor unemployment rate	50188	7.04	2.98	1.54	20.50
G8 summit pledges	49800	0.40	0.68	0.00	5.00
Global activity	52416	0.37	0.48	0.00	1.00
Fragile state assistance	49800	0.11	0.31	0.00	1.00
Log(GDP)	43406	26.92	1.56	22.58	30.24
Log(bilateral aid)	52367	21.37	1.59	16.81	24.20
Multilateral aid share	52367	0.31	0.13	0.07	0.85
Administrative cost share	52349	6.02	1.75	0.00	13.61
Researcher density	46482	7.52	2.89	1.35	17.25
Log(R&D expenditure)	46806	22.82	1.67	17.70	26.65
ICRG Index	47255	0.86	0.12	0.47	1.00
(Co-)chair at DAC	52416	0.07	0.26	0.00	1.00
Contested issue	49800	0.10	0.30	0.00	1.00